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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/873,311	06/05/2001	Akihisa Yamazaki	0879-0317P	5728

2292 7590 07/11/2006

BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER

TRAN, NHAN T

ART UNIT	PAPER NUMBER
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2622

DATE MAILED: 07/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/873,311

Applicant(s)

YAMAZAKI ET AL.

Examiner

Nhan T. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 5/23/2006 & 4/24/2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2,6,16,17,27,28,38,39 and 50-55 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2,6,16,17,27,28,38,39 and 50-55 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/23/2006 & 4/24/2006 has been entered.

Specification

2. Amendments to specification filed 4/24/2006 to correct spelling were received and are accepted.

Response to Arguments

3. Applicant's arguments filed 4/24/2006 with respect to claims 27, 28, 38 & 39 have been fully considered but are moot in view of a new ground of rejection.

4. Applicant's arguments filed 4/24/2006 with respect to claims 2, 6, 16, 17, 50-55 have been fully considered but they are not persuasive.

Regarding independent claims 2, 6, 16, 54 & 55, the Applicants assert that Takahashi does not disclose the idea of using an aperture out of the aperture range for normal shooting, and Takahashi does not disclose the use of aperture out of the

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aperture range for the normal shooting for automatic exposure photometry *or* video signals of auto focus (remarks, pages 14-16).

In response, the Examiner respectfully disagrees. As stated in the previous Office Action, the aperture for a normal shooting mode (area A) corresponds to aperture F 16 to about F 1.6, which is not reaching F 1.4 yet. This is clearly seen from **Fig. 9** where the aperture F 1.4 is little out of the normal aperture range for area A (see detail shown at limit area B1 of Fig. 9). The aperture range for the normal shooting in area A is ended before F 1.4. Thus, F 1.4 is the maximum aperture or fully open iris which is out of the normal aperture range (area A). See Fig. 9 and col. 9, lines 30-49. Although Takahashi does not disclose the maximum aperture or fully open iris (out of aperture range for normal shooting) is used when obtaining video signals of auto focus, such lack of teaching is compensated by Saruwatari. As taught by Saruwatari, a fully open iris (13) is set by a controller when obtaining video signals of auto focus to receive sufficient video signal output so that the focusing action can be more accurately performed. After the auto focus is complete, the iris returns to a smaller aperture size (known as larger aperture F value) for recording an image in a normal shooting condition (see Saruwatari; Fig. 11 and col. 15, lines 20-63). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Takahashi and Saruwatari to construct a camera having auto focus function utilizing fully open iris when obtaining video signals of auto focus during a photographing session so that the focusing action would be more accurately performed as suggested by Saruwatari.

Claim Objections

5. Claim 2 is objected to because of the following informalities: a semicolon (;) is required after the limitation "a controlling device that controls a diaphragm mechanism" in line 7 of claim 2. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 16, 17 & 28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 16, in lines 5 & 7 of claim 16, the limitation "said aperture" cannot be determined because there are two different apertures in the antecedent basis ("an aperture of a camera" and "an aperture out of an aperture range for normal shooting"). Thus, claim 16 renders indefinite.

Regarding claim 17, this claim is also rejected as being dependent from claim 16.

Regarding claim 28, in line 3 of claim 28, the limitation "the shooting mode" cannot be determined because there are several shooting modes in the antecedent basis ("normal shooting", "high-resolution shooting", and "low-resolution shooting" modes). Thus, claim 28 also renders indefinite.

The following art rejection is applied to claims 16, 17 & 28 as best understood in view of the 112 second paragraph rejection above.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 16 & 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Takahashi et al (US 5,831,676).

Regarding claim 16, Takahashi discloses a method for controlling an aperture of a camera, comprising the steps of:

determining an aperture (i.e., F 1.4 or fully open aperture) out of an aperture range (F 1.6 to about F 1.4 which is greater than F 1.4) for a normal shooting (area A) which secures predetermined optical capability (see Fig. 9 and col. 9, lines 30-42); and controlling a diaphragm mechanism (iris 2 and iris driving circuit 14; Fig. 3) to use said aperture according to a shooting mode selected (i.e., portrait mode corresponding to area B and/or C; see col. 21, lines 3-7, 35-47), wherein the aperture is set within the normal shooting range (F 1.6 to about F 1.4) in the shooting mode. See Fig. 9; col. 9, lines 30-42.

Regarding claim 17, see the analysis of claim 16 for the portrait mode.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2, 6, 50, 51, 54 & 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al (US 5,831,676) in view of Saruwatari et al (US 6,727,949 B1).

Regarding claim 2, Takahashi discloses an apparatus for controlling an aperture of a camera, comprising:

a first determining device (25, 19, 20; Fig. 3) that determines an aperture range (range from F 16 to about F 1.6 which is greater than F 1.4) for a normal shooting (area A) which secures predetermined optical capability (see Fig. 9; col. 6, lines 18-47 and col. 9, lines 30-42);

a second determining device (25, 19, 20) that determines an aperture range (range of F 1.6 to F 1.4 or fully open aperture) including an aperture (F 1.4 or fully open aperture) out of the aperture range for the normal shooting (see Fig. 9; col. 9, lines 43-53);

a controlling device (25) that controls a diaphragm mechanism (2, 13, 14; Fig. 3);

the controlling device capable of setting the aperture (F 1.4 or fully open aperture) out of the aperture range for normal shooting as determined by the second determining device (see Fig. 9; col. 9, lines 43-53), and the controlling device capable of setting the aperture within the aperture range determined by said first determining device when recording an image (see Fig. 9; col. 9, lines 38-42 and col. 4, lines 34-54, wherein an aperture within the range F 16 to about F 1.6 corresponding to brightness of area A is set for recording an image into a recording medium (8) in a normal shooting condition).

Takahashi does not explicitly teach that the controlling device sets the maximum aperture (F 1.4 or fully open aperture) when obtaining video signals of auto focus. However, as taught by Saruwatari, a fully open iris (13) is set by a controller when obtaining video signals of auto focus to receive sufficient video signal output so that the focusing action can be more accurately performed. After the auto focus is complete, the iris returns to a smaller aperture size (known as larger aperture F value) for recording an image in a normal shooting condition (see Saruwatari; Fig. 11 and col. 15, lines 20-63).

Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Takahashi and Saruwatari to construct a camera having auto focus function utilizing fully open iris when obtaining video signals of auto focus during a photographing session so that the focusing action would be more accurately performed as suggested by Saruwatari.

Regarding claim 6, see the analysis of claim 2. Additionally, Takahashi discloses a taking lens (lens 1; Fig. 3); a diaphragm mechanism (2, 13, 14) that adjusts an amount of light entering the camera through the taking lens (Fig. 3; col. 4, lines 34-45).

Regarding claims 50 & 51, it is clear in the combined teachings of Takahashi and Saruwatari that an operation of obtaining the video signals of the auto focus is performed prior to shooting for recording of the image. See Saruwatari; Fig. 11 and col. 15, lines 33-62 for recording step S408.

Regarding claims 54 & 55, see the analyses of claims 2 & 6, respectively.

9. Claims 52 & 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al (US 5,831,676) and Saruwatari et al (US 6,727,949 B1) as applied to claims 50 & 51 and in further view of Kondo (US 5,585,942).

Regarding claims 52 & 53, Takahashi and Saruwatari do not explicitly teach the operation of obtaining the *at least one* of the photometry data of the automatic exposure and the video signals of the auto focus is performed by half-depressing a release button, and the shooting for the recording of the image is performed by fully depressing the release button.

Kondo teaches a camera comprising a two-stroke release button (SW1 and SW2) shown in Fig. 3; col. 5, lines 227-30. Kondo further teaches that the camera

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performs at least automatic exposure utilizing photometry data obtained from an image sensor (3) when the release button is depressed to SW1 (step S4; Fig. 4A). When the release button is further depressed to SW2 (step S29; Fig. 5), an image is captured and recorded into a memory card (step S42 & S43; Fig. 6). See Kondo; Fig. 4A – 6; col. 5, lines 63 – col. 8, line 45.

Therefore, it would have been obvious to one of ordinary skill in the art to incorporate the teaching of Kondo into the combined apparatus of Takahashi and Saruwatari to implement a two-stroke release button for performing at least one of auto exposure and auto focus in response to activation of a half-depressed position and further recording an image in response to activation of a full-depressed position so as to provide a better control of the camera with simplified user interface.

10. Claims 27, 28, 38 & 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al (US 5,831,676) in view of Saruwatari et al (US 6,727,949 B1) and in further view of Norita et al. (US 6,906,751 B1).

Regarding claim 27, the combined teachings of Takahashi and Saruwatari as analyzed in claim 2 disclose all limitations of claim 27. Additionally, Takahashi also discloses that the controlling device sets an aperture within the aperture range as determined by the first determining when shooting in a high-resolution mode (normal mode of area A). Takahashi and Saruwatari do not clearly disclose that the auto focus is performed in a low resolution mode.

However, Norita teaches a camera apparatus that reads out a small number of pixel signals of an image sensor (known as thinning mode or low-resolution mode) when performing auto focus operation, and reads out all pixels of the image sensor when recording an image so that time consuming for reading out pixel signals for auto focusing is greatly reduced, thereby enabling a quick and efficient auto focus operation (see Norita, Figs. 26-28, col. 19, lines 10-62 and col. 1, lines 52-59).

Therefore, it would have been obvious to one of ordinary skill in the art to further modify the combined apparatus of Takahashi and Saruwatari to incorporate the teaching of Norita by using a low-resolution image when performing auto focus operation so that time consuming for reading out pixel signals for auto focusing would be greatly reduced, thereby enabling a quick and efficient auto focus operation.

Regarding claim 28, Takahashi discloses that the controlling device uses said second determining device when a portrait mode is selected as the shooting mode (see Takahashi, col. 21, lines 3-7, 35-46).

Regarding claims 38 & 39, see the analyses of claims 27 & 28, respectively.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nhan T. Tran whose telephone number is (571) 272-

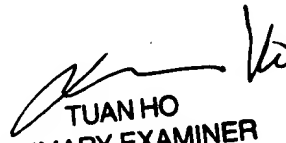
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7371. The examiner can normally be reached on Monday - Thursday, 7:30am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NT.


TUAN HO
PRIMARY EXAMINER